

Time's Here to Swat the Fly

HOUSE FLIES carry disease from one human being to another. This has been proved scientifically. And now it remains to prevent these insects, or to reduce their numbers in the community, that the diseases they convey may be reduced also, or even abolished. One method of dealing with disease-bearing insects is to trap and kill as many as we can. For this reason "kill that fly" or "swat that fly" crusades have been instituted in many places. But it has been found by experiment that we cannot hope to kill sufficient flies to reduce seriously their total numbers. This is because flies breed at a very great rate when the weather is warm, and the total numbers which we can kill is so small, when compared to the total numbers born, that the result of the "swatting" campaign has been disappointing.

All our efforts should be directed at preventing house flies from breeding—for prevention is better than cure. The best way to do this is to observe strict cleanliness—municipal cleanliness and home cleanliness. Then these insects will desert the neighborhood, and the diseases they convey will vanish. This was the policy pursued on the Suez and Panama canals to prevent malaria and yellow fever, which are conveyed from one person to another by mosquitoes. The method was most successful.

The house fly breeds in filth. Each female fly, as soon as the weather is warm enough, lays about 150 eggs on collections of manure, decomposing garbage, street rubbish or house refuse, and the eggs hatch into tiny maggots. After five days have passed, each maggot becomes a rolled-up, bean-shaped chrysalis, and after another five days each chrysalis gives birth to a two-winged, six-legged, whiskered, bristly flying insect known to us as the house fly. Bluebottles breed similarly, but they prefer to lay their eggs on rotting carcasses or decaying animal matter. The house fly and the lesser house fly convey disease by bathing their legs in germy material, which they find during their feeding forays. The germs stick to their legs and to the tips of their telescopic proboscides, and then are carried to the milk jug, the teacup, to the cut loaf, and to the culinary utensils. Sometimes the flies swallow the germs, which multiply inside them, and afterwards the concentrated disease focus is again deposited wherever the fly settles.

We can be rid of flies if we observe the ordinary common sense rules of cleanliness and sanitation. No fly lairs, or breeding places, must be permitted near human habitations. All unclean places must be made clean regularly once a week by the sanitary or municipal authorities, and then the fly maggots will be unable to come to maturity, and so the pest will be exterminated. Recently a war on flies has been taken up assiduously by the press, and the medical officers of health are exerting themselves to start antity campaigns.

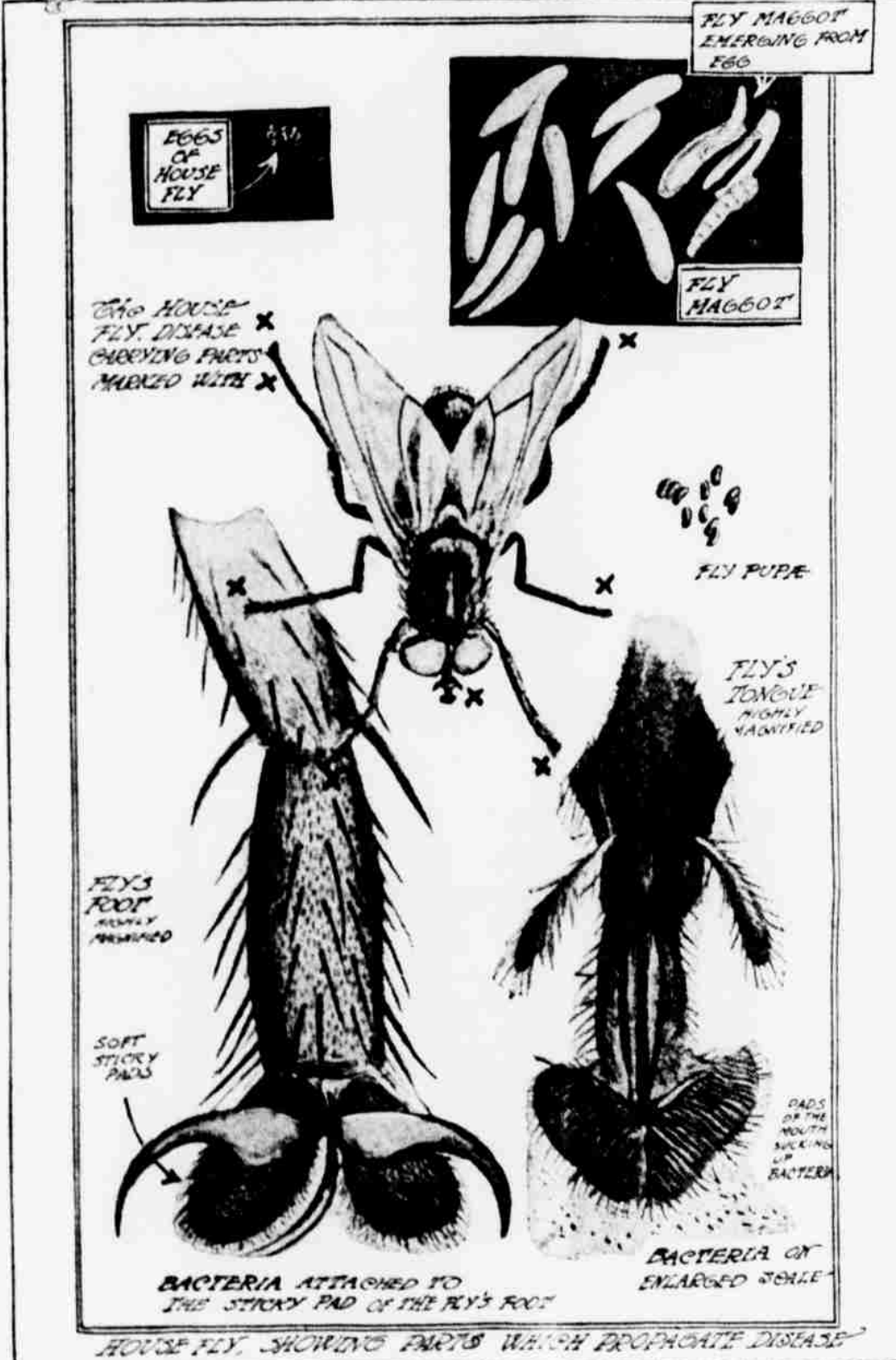
Thus the municipal authorities have made a start, and it remains for the individual householders to help them. Each one of us can do our share of fly prevention. We can prevent flies in our own homes. On one morning, every week, we must inspect our own premises. Begin in the kitchen. Observe every nook of the scullery, the pantry, the cellar, even the dining room, and see that every corner and cranny is scrupulously clean. Next, we must examine the dustbin to see if it is completely cleaned out. Let there be no small collections of tea leaves spilled out of it, or rotting peelings or scraps of bread, or any other places where flies can breed. Let the cheese be well covered, and the bread be in its pan, and all food within the larder in its proper place. And let everything be clean and wholesome.

It is most important, also, to inform our neighbors on every convenient occasion of the disgusting and dangerous character of house flies, and to ask them to co-operate in preventing them. Then there will be an organized campaign against these insects. The more we talk about it the sooner will the thing be done. The education of children in the matter is also most essential. Then a new generation will grow up knowing the dangers of flies and how to prevent them. Schoolmasters and schoolmistresses should be invited to teach their charges about flies, and should set the example by instructing them in the tenets of school cleanliness. This will help us greatly. If we all keep our own homes sweet and clean, our children's lives will be spared the horrors of summer sickness, typhoid will be lessened, doctors' bills will be reduced, and the health of the community will be improved enormously. With regard to house flies and fly-borne diseases the remedy is simple. Let us apply it.

As a result of experiments, the specialists of the United States department of agriculture have discovered that a small amount of ordinary borax sprinkled daily on manure will effectively prevent the breeding of the typhoid or house fly. Similarly, the same substance applied to garbage, refuse, open toilets, damp floors and crevices in stables, cellars or markets, will prevent fly eggs from hatching. Borax will not kill the adult fly nor prevent it from laying eggs, but its thorough use will prevent any further breeding.

The investigation, which included experiments with many substances, was undertaken to discover some means of preventing the breeding of flies in horse manure without lessening the value of this manure as a fertilizer for use by the farmer. It was felt that if some means of preventing the breeding of flies near a human habitation could be devised, the diseases spread by these filthy germ carriers could be greatly reduced. While the "swat the fly campaign," traps and other devices for reducing the number of typhoid-carrying flies are of value, they are of less importance than the prevention of the breeding. It was realized, however, that no measure for preventing the breeding of flies would come into common use unless it was such that the farmer could use it on his manure pile without destroying its usefulness for growing plants, and without introducing into the soil any substance that would interfere with his crops.

As a result of experiments carried on at the Arlington farm, in Virginia, and New Orleans, La.,



the investigators found that 0.62 of a pound of borax, or 0.75 of a pound of calcined colemanite (crude calcium borate) would kill the maggots and prevent practically all of the flies ordinarily breeding in eight bushels of horse manure from developing. This was proved by placing manure in cages and comparing the results from piles treated with borax and from untreated piles. The borax, it was found, killed the fly eggs and maggots in the manure and prevented their growth into flies.

In the case of garbage cans or refuse piles, two ounces of borax or calcined colemanite, costing from five cents a pound upward, according to the quantity which is purchased, will effectually prevent flies from breeding.

While it can be safely stated that no injurious action has followed the application of manure treated with borax at the rate of .62 pounds for eight bushels, or even larger amounts in the case of some plants, nevertheless borax-treated manure has not been studied in connection with the growth of all crops, nor has its cumulative effect been determined. It is therefore recommended that not more than 15 tons of the borax-treated manure should be applied per acre to the field. As truck growers use considerably more than this amount, it is suggested that all cars containing borax-treated manure be so marked, and that public health officials stipulate in their directions for this treatment that not over .62 (62-100) of a pound for eight bushels of manure be used, as it has been shown that larger amounts of borax will injure most plants. It is also recommended that all public health officials and others in recommending borax treatment for killing fly eggs and maggots in manure warn the public against the injurious effects of large amounts of borax on the growth of plants. Purchasers of manure produced in cities during the fly-breeding season should insist that the dealers from whom they purchase give them a certified statement as to whether or not the manure in the particular car or lot involved in the purchase has been treated with borax.

In feeding to hogs garbage that contains borax care is also recommended, especially when the animals are being fattened for market. Borax is not a very poisonous substance and the feeding of garbage that contains it to hogs is not likely to be a serious matter. On the other hand, borax in large quantities does produce gastric disturbances and for this reason a certain amount of care is advisable.

The method for using this substance in the case of stables is to sprinkle the borax or colemanite in the quantities given above, by means of a flour sifter or other fine sieve, around the outer edges of the pile of horse manure. The manure should then be sprinkled immediately with two or three gallons of water to eight bushels of manure. It is essential, however, to sprinkle a little of the borax on the manure as it is added daily to the pile, instead of waiting until a full pile is obtained, because this will prevent the eggs which the flies lay on fresh manure from hatching. As the fly maggots congregate at the outer edge of the manure pile, most of the borax should be sprinkled there.

Borax costs five to six cents per pound in 100-pound lots in Washington, and it is estimated that at this rate it would cost only one cent per horse per day to prevent all breeding of flies in city stables. If calcined colemanite is purchased in large shipments, this cost should be considerably less. At the same time, if the borax is used on the manure only in the proportions stated, its value for use in the garden or for sale to farmers will not be lessened.

In view of this discovery, there now seems little excuse for any horse owner or resident of a city allowing typhoid flies to breed in his stable or garbage can.

It is believed that this information will greatly help the health authorities in their campaign against the typhoid fly. The health authorities have long tried to prevent the breeding of flies in city stables through the use of iron sulphate as a larvicide. In the case of iron sulphate, however, a large amount is required, and other insecticides, such as paris green or potassium cyanide, while effective in killing flies, are very expensive or extremely poisonous. Borax, which is used freely in most households, and is readily available in all parts of the country, has the advantage of being comparatively nonpoisonous and nonflammable, readily soluble in water and easy to handle. It can be purchased at retail for ten cents a pound, and a single pound used as directed in a garbage pail or open toilet may prevent the breeding of hundreds of dangerous flies.

EXPERIENCE AS A TEACHER.

Little Lemuel—Paw, why do so many people borrow trouble?
Paw—Because, son, that is the only thing most of them can borrow without security.

MOVE NOT POPULAR

Objections to Sealed Proposals of Marriage.

Speculations as to Some of the Results if a Proposed New York State Law Should Be Put Into Effect.

The attention of all single men and maidens, and of widows also, is directed to a bill introduced into the New York legislature providing that no agreement shall be enforced by the courts unless they have been reduced to writing and signed by the parties. This is a subject worth consideration at all times, but it is especially appropriate at the season when a "young man's fancy lightly turns to thoughts of love."

The purpose of the bill, ostensibly, is to protect men from suits for breach of promise which are, strictly speaking, blackmailing enterprises. But it would serve equally well to protect men whose favorite recreation is to make love to women, and when that has been accomplished, make some more love to some other women. The written proposal of marriage, duly signed, has several points of advantage about it, but it is important that all marriageable persons should be well informed of the measure if it should become a law, and be on their guard. If the rules of the game are to be changed there should be full notice for the protection of all concerned.

The change would probably reduce the marriage rate in a notable percentage. There are some bashful men who find it easier to propose by letter than orally, but most men glide gently into an avowal of their affection under the personal magnetism of the charming creature, and are liable to be scared off by the production of a blank form looking like an income-tax return, with the request of the girl that they fill it out and sign it while she is communing with her soul whether to add her signature.

When Sir Something Other proposed to Peg o' My Heart, who had already received matrimonial overtures from two undesirable, she asked: "Are you making a proposal of marriage to me?" Whereat the man she was dying to marry stalked off to the window and looked gloomily into the river, and the alarmed girl upbraided herself for her folly in talking too much.

In this case the man had to get over his alarm at the gross, open and palpable naming of the transaction, because the play could not have gone on otherwise; but many a proposal off the stage has been permanently wrecked by the injection of too much common sense into an affair usually described by others than the participants as a piece of silliness.

How many men would sign and seal a written agreement of marriage if the girl, upon receiving the tender avowal had promptly gone to her father's desk and obtained a sheet of paper and a pen and ink and asked the infatuated man to please reduce his pleasant remarks to writing?

Perhaps it would be just as well to leave the proposal to oral or osculatory terms and merely abolish suits for breach of promise of marriage. No woman really wishes to marry the man who has thrown her off, or if she does, it is only for the possession of some of his money. The modern woman sneers at the idea of marriage as a career, she can make her own career, just as her brother does.

Therefore, peculiarly, she is not injured by a broken engagement, and the law undertakes to indemnify the woman, not for her injured feelings but for the substantial material loss when a good catch gets away from her. The suit for breach of promise is an anachronism.—Philadelphia Record.

FROM ALL THE WORLD

In 20 years the city of Buenos Aires has almost trebled its population. Small kerosene stoves are practically the only heating and cooking stoves used in Paraguay.

Since the reign of George II no abbreviations have been allowed in legal documents in England.

More than five marriages are not permitted one person in Russia, and eighty years is the marriageable limit.

The earth, under a thick covering of snow, is ten degrees warmer than the air immediately above the snow. Auction sales originated in ancient Rome, and were introduced to enable soldiers to dispose of spoils of war.

Chemists know about 150,000 organic chemical compounds, and are increasing the list from 5,000 to 8,000 a year.

From 1,325,000 tons of tar annually produced in Great Britain from coal, about 10,000,000 gallons of benzol are obtained.

It is believed that an excellent substitute for silk has been produced in Panama by crossing the blooms of certain wild fiber plants with a species of texture finer than cocoon silk, but with a tensile strength about five times greater.

A steel screw, which for 20 years helped to hold together the guide board of a wallpaper trimmer, was worn completely in two merely by paper rubbing against it. During that time approximately 400,000 rolls of paper were trimmed by the machine. The screw was cut as smooth as could have been done by any instrument.

England's per capita consumption of codfish is the greatest of any country.

The only animals left alive in the Antwerp zoo are the elephants, which are now being used for military traction purposes.

Of about 1,400,000 pounds of caviar obtained each year by the Astrakhan fisheries, approximately 75 per cent is exported.

Dr. R. Armstrong-Jones, chief medical officer at Clayburn asylum, Woodford, England, in a lecture on the relation of genius to insanity, recently said that he knew a man who could recite the "Decline and Fall of the Roman Empire" from cover to cover, yet his mind continued to be of the nursery type, and he did not understand what he dramatically recited.

Russia Becomes Temperate

The prohibition of selling brandy in the government monopoly shops was introduced throughout the Russian empire from the beginning of the war on the day of mobilization, and has now been in force for more than eight months. One of the Russian papers has made inquiries concerning the results of this measure, and has published some of the statistical data that was collected. The following list shows the consumption of vodka in the city of Moscow in 1914 compared with the preceding year: July 612,980 gallons in 1913 and 529,124 gallons in 1914. August, 667,826 gallons in 1913 and 23,873 gallons in 1914. October, 507,688 gallons in 1913 and 2,912 gallons in 1914. During the first three months vodka could be obtained at the first-class restaurants for consumption in the same, the selling of vodka in bottles being prohibited under a heavy fine.

Some Difference

"Did you see where an official says that the Pullman porter's position is regarded as an uplift?"
"He made a mistake, he meant a hold-up."

Experience

"Any sort of kite around about your suburban place?"
"Yes, lots of parasites."

It is the fate of practically every man to be bossed by his rich relatives and imposed upon by his poor ones.

The Direct Relation

Between What We Eat
and What We Are
Is Well Established

This is both reasonable and scientific, for activity uses up tissue cells of body and brain which must be replaced daily from proper food.

A careful eater—one who selects food for its nutritional value—is usually strong in body and keen in mind.

Thousands of people, with an eye to nutritional values in food, are using

Grape-Nuts

This delicious food, made of whole wheat and barley, contains all the nutrition of the grain, including those priceless mineral elements which are vitally necessary for rebuilding the tissue cells of body, brain and nerves.

"There's a Reason" for Grape-Nuts

—sold by Grocers everywhere.